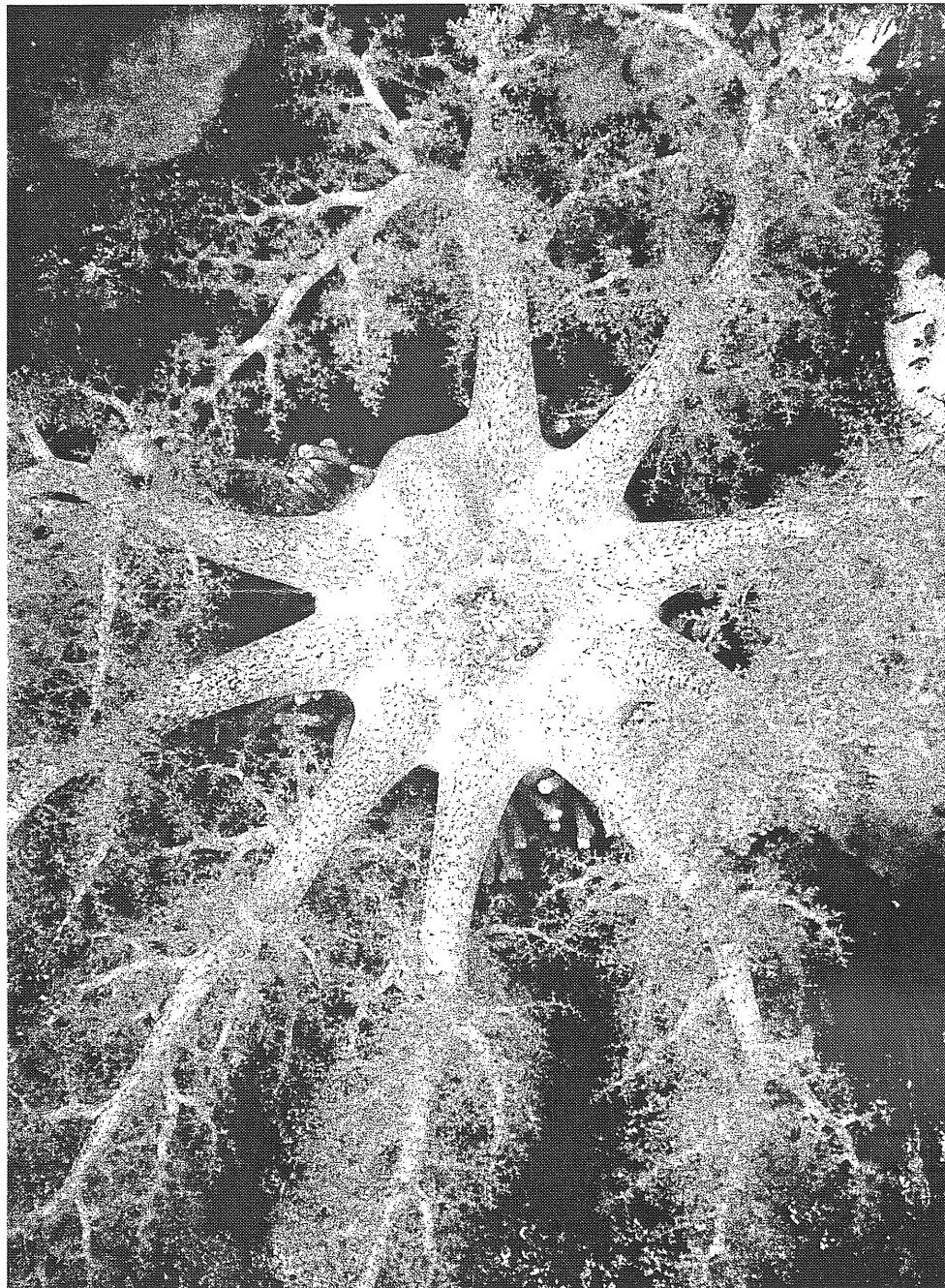


**Artists Using Science and Technology**

Ylem (Eye-lum): The exploding mass out of which the universe emerged in the Big Bang

**Ylem Newsletter**

**Vol. 14, No. 7 July 1994**



*Cucumaria Miniata*  
photo by Michael McGuire 1994

# Photography, Digitally

by Michael McGuire,

Many people tell us that photography is irretrievably damaged by becoming digital. *The National Geographic* moves pyramids and the *Scientific American* shows us Marilyn Monroe on the arm of Abraham Lincoln. Of course this reminds us that we must put quotes around the term "photographic evidence." But this is not new. There is a long and sorry history of photographic fakery. But more positively, consider the work of Photographer Jerry Uelsmann. He gives us impossible images which seamlessly superpose several negatives in a single print to marvelous surrealistic effect. This he does by classical wet chemistry photographic methods—nothing digital. Understanding the photographer's intention is the starting point for understanding the image whether digital or classical.

What excites me is that something of value has been gained. There is a printmaking tradition in photography best expressed in Ansel Adams' analogy, that the negative is like a musical score, and the print from it a performance. We have a new instrument which marvelously expands the intrinsically photographic things one can do in making prints. With traditional wet chemistry, black and white was prized over color because contrast could be adjusted with changes in paper grades and developer chemistry with no ill effects. Attempts to do this with color materials caused color shifts and other problems. Computationally this is no longer true. Luminance (light vs. dark) can be decoupled from chrominance (colorfulness) and both adjusted independently. One is free to move in any direction in color space. The concepts of contrast control learned in the black and white darkroom extend naturally to both the luminance and chrominance, and possibly other dimensions of a digital color print.

My earlier work was about photographing the manifestations of fractal geometry in the natural world and culminated in a book I published

two years ago called *An Eye for Fractals, A Graphic & Photographic Essay*. In summary it is about patterns that intensely repeat themselves over a wide range of scales. They have the property, on the one hand, of being very simple in terms of the rules that will generate them, and on the other of being visually very complex. Then about five years ago I made a conscious decision to take up Scuba diving and take my photography underwater. I went underwater partly for the color aspect of the fractals to be found there, and partly because of the strong flavor of marine biology I find in that most famous of fractals, the Mandelbrot set.

The equipment I use for underwater photography is a Nikon 8008S camera with a 60 mm macro lens for closeup work and a 24 mm lens for general views. This is a conventional

autofocus SLR system. To go underwater I put it in an Ikelite plastic housing and illuminate with Ikelite Substrobe Ai flash units. I use flash for almost all my pictures because seawater progressively absorbs more of the red end of the spectrum the deeper one goes.

The picture on the cover is of the feeding tentacles of an orange sea cucumber (*Cucumaria Miniata*). It was taken at the Breakwater in Monterey, California.

The artist

Michael McGuire,  
mcguire@hpl.hp.com



Angles,  
iterated function system graphic  
by Michael McGuire

# Ylem Forum: The Joys of Mathematics

**July 6, 7:30 pm**  
**McBean Theatre,**  
**The Exploratorium,**  
**3601 Lyon St., San Francisco**  
**Contact: Trudy Myrrh Reagan**  
**415-856-9593**

**Jef Raskin:** Art and Mathematics, a Personal View. Raskin created the Macintosh Project at Apple. It is not well-known that he was once an art professor, at UC San Diego. He will share one of the math projects he is currently pursuing. **Dan Wheeler:** Mathematical Amusements. Wheeler is a math teacher who loves 3-D geometry, topology and knot theory. **Bill Blackwell,** Mathematics and Architecture. Many surprises here!

## Video: Helaman Ferguson, Mathematician/Sculptor.

Ferguson translates mathematical formulae into sensual marble and bronze using computer-aided manufacturing measuring techniques.

### The Geometer's Sketchpad.

A demonstration of software that makes trying out complex geometrical ideas very pleasant. Math and art displays! Free and open to the public! This is the Exploratorium's free night, so come early and play.

artist, Helaman Ferguson

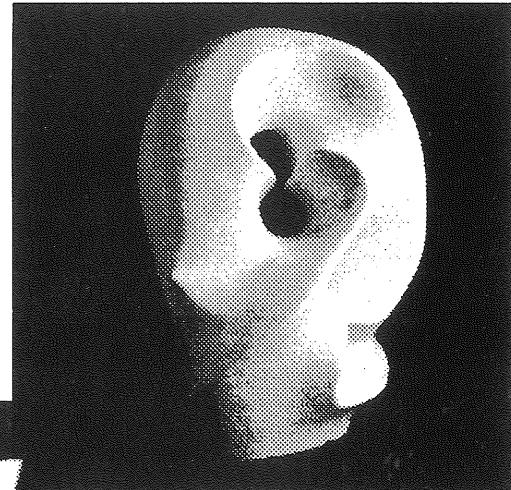


Figure-Eight Knot Complement II,  $H^3/\Gamma$  marble sculpture by Helaman Ferguson

## Figure-Eight Knot Complement II

It appears that one sees theorems but that one hears proofs. Perhaps it is because theorems involve a global or gestalt perception, expressible visually, whereas proofs are presented step by step, line by line, in a sequential manner, much the way we speak. We hear on a time line one dimensionally; we see on a visual plane two dimensionally. Theorems may be of three kinds, 1) those that carry an element of surprise, saying hah! it wasn't what you so naïvely thought, and 2) those that carry an element of relief, saying whew! am I glad that is true; and finally 3) any other sort.

In this sculpture, *Figure-Eight Knot Complement II*, the featured ridge curve between the polished marble and the honeycombed (textured) marble is the Figure Eight Knot.

More details about the mathematics behind this and related sculptures by Ferguson are to be found in the recent book about him, *Helaman Ferguson, Mathematics in Stone and Bronze*, \$29.95, available from Meridian Creative Group, 5178 Station Rd., Erie, PA 16510; 814-898-2612.

## Acknowledgement

The Ylem Board acknowledges the gifts and loyal support of Helen Carter King.

# YLEM

# CALENDAR

*July 6*

## **Ylem Forum: The Joys of Mathematics**

Details on page 3.

*July 3, 5-8 pm*

## **Solart Global Network Meeting**

Details on page 3.

*July 3, 2:30 and 7:30 pm*

## **Cosmic Catastrophes**

A visual and spoken-word performance of Andrew Fraknoi's true tales of cosmic disasters: a swarm of comets set to collide with Jupiter, and a similar event that may have dispatched Earth's dinosaurs.

**Robert C. Southwick Theater, Foothill College, 12345 El Monte Rd, Los Altos Hills, CA 94022**

*July 3, 1-4 pm*

## **Disco Karaoke**

McBean theater becomes a disco karaoke club with laserdisc video backgrounds and lyrics.  
**McBean Theatre, The Exploratorium, 3601 Lyon St., San Francisco; 415-563-7337**

*July 14, 8am-1 pm*

## **Alternative Cars On Display**

A preview exhibition for Solar Energy Expo and Rally '94 in Ukiah. Eco-cars and alternative vehicles powered by natural gas, electricity, and the sun will be displayed outside the Exploratorium's north entrance before heading north for Ukiah on July 15.

**The Exploratorium, 3601 Lyon St., San Francisco; 415-563-7337**

*July 15, 6:30 pm*

## **Comet Impacts: Fact and Fiction**

The Center for Extreme Ultraviolet Astrophysics and the San Francisco Exploratorium present highlights of the upcoming Comet Impact of Shoemaker-Levy 9 with Jupiter. Scientists and sci-fi authors invite you to talks and exhibits which will focus on the impending comet impact as well as other impacts in history.

More information: **J. Hichman 510-643-5669  
Palace of Fine ArtsTheater, San Francisco**

*July 21-24*

## **Imaging the Future (Kauai, Hawaii)**

Conference on the effect of the digital revolution on design jointly produced by the American Film Institute and Kauai Institute for Communications Media. Design in motion picture production; print and graphic design; architecture; industrial design and packaging;

broadcasting; urban and environmental planning; computer interfaces; education and publishing. Held at the Princeville Hotel, Kauai, Hawaii. Info:

**1-800-999-4234; 213-865-765-7690**

*Through July 23*

## **Consider a Window: Three Views from a Metaphysical Window: Art, Computers, and Fantasy**

Featuring new work by artists: Lisa Wray, Ylem member Victor Acevedo and Uri Dothan.

**The Williams Gallery, Mary Lou Bock, Director 8 Chambers St. Princeton, NJ 08542; 609-921-1142**

*July 27-29*

## **SIGGRAPH '94 (Chicago, IL)**

"Special Interest Group, Graphics" Convention, the biggest in the U.S. Usually has art and animation shows covering the major aspects of computer art. Convention this year will be held in Orlando, Florida, at the Orange Co. Convention Center.

**SIGGRAPH Conference Management, 401 N. Michigan Ave., Chicago, IL 60611; 312-321-6830; siggraph94@siggraph.org**

*August 20-25*

## **ISEA 94 (Helsinki, Finland)**

The 5th International Symposium on Electronic Art. Features workshops on such topics as the relationship of culture to technology, electronic art in universities, and education and entertainment, exhibitions, concerts and electronic theater, and an "ambient night" party.

**ISEA '94 Office, University of Art and Design, UIAH, Media Lab, Hämeentie 135 C. FIN, 00560 Helsinki, Finland; tel +358-0-7553601; fax -3602; isea@uiah.fi**

*Through September 18*

## **Images du Futur '94 (Montréal, Québec)**

An interactive exhibition featuring prominent Japanese light artists (exhibiting an interactive "zen garden," a magic piano, and the latest fashions in "light" wear), an "intelligent" house, an automated confessional, and other attractions.

**La Cité des Arts et des Nouvelles**

**Technologies de Montréal, 15, rue de la Commune uest, bur. 101, Montréal, Québec, Canada, H2Y 2C6; 514-849-1612; fax 982-0064**

All events and exhibits are in the San Francisco Bay Area except when otherwise noted.

*July*

## **The Interactive Sound Studio**

At the Exploratorium, the studio offers exhibits, workshops, and demonstrations covering a wide range of music-making technologies (e.g., July 5, demonstration of an interactive system allowing "morphing" between musical styles, an interactive performance featuring a "human synthesizer" and "human delay loops," and July 6, music derived from broken windows and electric skis).

**The Exploratorium, 3601 Lyon St., San Francisco; 415-563-7337**

*Through December 31*

## **Space, Earth, and Earth Environment**

Fine arts quilts, an unusual medium for these subjects.

**NASA Visitor Center, Moffet Field, Mountain View, CA**

*July 5-29, 8 am-5 pm*

## **Digital L.A.**

A survey of current digital art in the Los Angeles area, curated by Ylem member Michael Wright and featuring Wright and fellow members Victor Acevedo, Mason Lyte, Karen Schminke and Bettina Brendell. Reception July 8, 6 to 8:30 pm.

**Sam Francis Gallery, Crossroads School for Arts and Sciences, 1714 21st St., Santa Monica, CA**

*Through July 24*

## **In the Spirit of Fluxus**

The radical art movement from 1962 to 1978 which promoted performance works and multimedia installations. It foreshadowed much of what is done today in electronic art. Among the 40 artists represented are Joseph Beuys, Nam June Paik, Yoko Ono and Claes Oldenberg.

**San Francisco Museum of Modern Art, Van Ness and McAllister, San Francisco, CA**

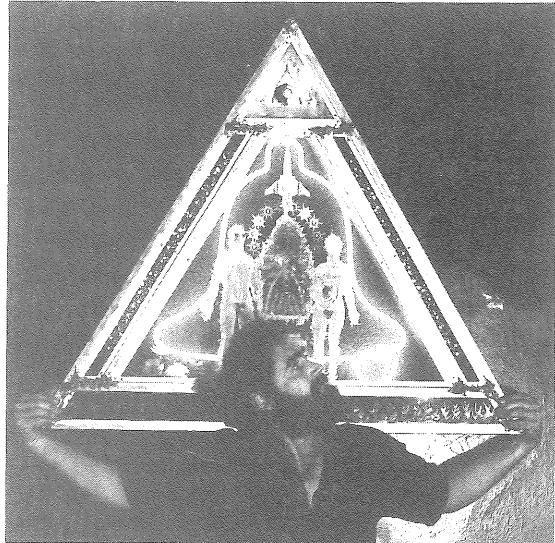
*Through August 13*

## **Random Access (Seattle, WA)**

An Exhibition of High Tech Art. Curated by Ylem members Janet and Edward Galore. Thoughtful and exciting works which use emerging technologies as artistic mediums, challenging the nature of art and the mediums themselves. Many want us to believe that technology and art are already thoroughly intermeshed and working well; that new technology is enabling non-artists to pursue creative channels untethered by conventional mediums; that interconnectivity is pervasive.

# *Seventh Annual Directory of Artists Using Science and Technology*

**Deadline:  
September 1st, 1994**

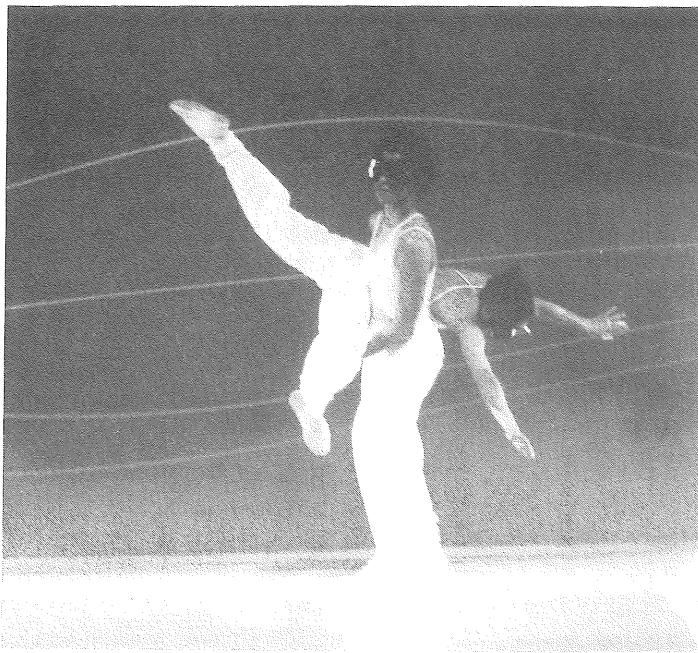


*"Satan's Neon Nuanced Nuclear Nativity,"  
electro-kinetic sculpture by Lee Champagne*

## **To submit a photo of your work or an ad:**

Please include the following information on the back of your original: No Post-Its, please; use a label with secure adhesive.

- ① Your name**
- ② Caption for picture (title, medium, date, etc.)**
- ③ An arrow indicating which is the top of the image**



*"Synergy," performance work by Robert J. Martin*

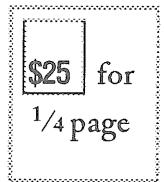
Abundantly illustrated and updated annually, the *Directory* lists about 250 artists, scientists, art visionaries and enthusiasts, all members of Ylem: Artists Using Science and Technology. Over its thirteen-year lifespan Ylem has attracted a variety of well known figures in the arts and sciences. The artesian pressure of their talent opens up opportunities to exhibit and perform in an otherwise skeptical gallery milieu. A vital networking resource, the *Directory* contains artists' contact information with descriptions of their work and is received by collectors, gallery and museum curators, art critics and educators. One year membership in Ylem includes a copy of the edition of the *Directory* in which you are listed.

## ***To be listed in the Directory:***

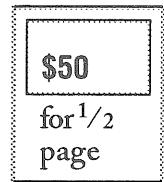
If you are not already a member of Ylem, or your Ylem Newsletter mail label says "Last Issue: 8/94" or sooner you must join or renew by September 1st to be in the *Directory*. Please see reverse.

### **④ Fee category:**

... 8½ in. ...



11 in.  
↓



- ⑤ If you want your original returned, please indicate and enclose a self-addressed stamped envelope.**

- ⑥ Photo fees above are *in addition to membership dues*. More details on reverse.**

# The Directory of Artists Using Science and Technology

As well as being listed in the *Directory*, your membership in Ylem includes:

- A copy of the *Directory* in which you are listed along with 250 other artists and enthusiasts of new art forms. Please see reverse about how members may have their art published in the *Directory*. (If you join after the deadline, you will be listed in and receive a copy of the following year's *Directory*.)
- The monthly *Ylem Newsletter* containing articles on numerous topics along with news of members and a calendar of events and art opportunities.

Ylem also presents bi-monthly Forums and sponsors social activities and field trips in the San Francisco Bay Area.

## Yearly membership rates:

US Individual	\$30	Canada/Mexico add 5 US\$ to
US Institution	\$45	US rates; all other countries add
US Student or Senior	\$20	15 US\$ to US rates.

Please fill in only if you are joining for the first time or if information needs to be updated:

Membership includes the next edition of the *Directory*. The current *Directory* is also available at extra charge:

With membership in Ylem: \$6  
(+\$3 if outside USA)  
Not joining Ylem: \$15 (+\$3 if outside USA)

Please don't include my name when the Ylem mailing list is sold to other members for mailings.

NAME \_\_\_\_\_ PHONE (home) \_\_\_\_\_

BUSINESS NAME (optional) \_\_\_\_\_ PHONE (business) \_\_\_\_\_

ADDRESS \_\_\_\_\_ FAX \_\_\_\_\_

E-MAIL \_\_\_\_\_

PLEASE DESCRIBÉ YOUR WORK/INTERESTS \_\_\_\_\_  
(Art media; art-, science- or technology-related interests, activities, services) in 30 words or less.

Please write TITLE &  
DESCRIPTION OF  
PHOTO SUBMITTED on  
the back of your original  
to avoid confusion.

Send along with your picture and fees to the address above by September 1st, 1994

## ..... About photo submissions (continued from other side)

- If you have had your picture in the *Directory* before, a new picture is preferable.
- As the *Directory* is a black-and-white publication, images with good contrast and sharp focus are recommended. Please don't send color pictures with dot patterns or halftones (continuous-tone color OK).
- Photos with grey tones: We will make 100 line/inch halftone photostats. If your image has special reproduction requirements, please explain on the back of your original.
- Macintosh graphics files: Send your Mac disk if the art will print well on a LaserWriter.
- We will do our best to scale pictures to the area purchased (see reverse), but due to the dimensions of the pages it may have to be scaled smaller if the picture is too narrow, vertically or horizontally.
- If the art does not fill the picture area, we reserve the right to crop it.
- For more information call Kenneth Rinaldo:  
(415) 566-5133.



The curators believe that all of the above is exaggeration, and will explore that with Random Access (the name refers in part to how access to technology is inconsistent). Look for *C.A.I.R.E. (Cyberhead: Am I Really Existing?)* by Patrice Clare of New York; the coin-op *SimSex Arcade* by Seattle artist Clair Colquitt; a living, dynamic architectural phase space called *Interface/EnterPhase* by Mark and John Bain of Los Angeles; and other installations by James Acord of Richland, WA (the only artist awarded permission by the U.S. government to work with radioactive materials); David Galbraith and Teresa Seemann of Los Angeles; Bay Area artist Bruce Cannon; Seattle artists Kurt and Debla Geissel, Joel Kollin and Holly Bine, Guy Hundere, and others. Events will include an Electronic Cafe evening linking COCA with performers at another site), panel discussions, and performances.

**Center on Contemporary Art, 1309 First Ave., Seattle, WA; 206-682-4568**

*Through August 28*

#### **Hans Dehlinger (Frankenberg, Germany)**

An exhibit of Ylem member Hans Dehlinger's computer-algorithm drawings using a line plotter.  
**Kunsttreff Frankenberg e.V., Museum Thonet, Michael-Thonet-Strasse 1, 35066 Frankenberg, Germany**

*Through September 30, 9 am–6 pm*

#### **Icons & the Imagination**

An exhibit of computer art featuring two digital artists, Will Tait and John Ritter.  
**The Digital Pond, 50 Minna St., San Francisco, CA 94105; 415-495-7663; fax-3109**

#### *Ongoing* **CyberMind**

Discover a world of virtual reality as CyberMind takes you on a trip into cyberspace. Experience multiple 3D environments in 7 different virtual reality games.  
**CyberMind, One Embarcadero Center, San Francisco, CA; 800-49-CYBER**

*Deadline July 15*

#### **NEA Design Arts Program**

Grants to individuals including Project Grants and USA Fellowships. Grants support projects that advance design and benefit the public on a local, state, regional, or national level.  
**Design Arts Program, National Endowment for the Arts, Nancy Hanks Center, 1100 Pennsylvania Ave., N.W., #627, Washington, DC 20506; 202-682-5437; fax -5496**

*Deadline July 15*

#### **Ottawa '94 Internat'l Animation Festival**

Considering any animated (as recognized by ASIFA) film/video, under 30 minutes, made after May 30, 1992. 1/2" or 3/4" cassette (NTSC, PAL, or SECAM), 16mm or 35mm film, plus 3 b&w still photos for each production, bio and photo of filmmaker. Write for entry forms. **Ottawa '94 International Animation Festival, c/o Canadian Film Festival, 2 Daly Ave., Ottawa, Ontario, Canada, K1N 6E2; 613-232-6727; fax 613-232-6315**

*Deadline July 15*

#### **The Clio Awards**

Accepting submissions of broadcast and cable commercials in 3/4" video. Entry fee: \$100.  
**Clio Awards, 400 Madison Ave., Suite 1208, New York, NY 10017; 212-593-1900; fax 212-754-0581**

*Deadline July 23*

#### **Neon Self Portraits**

Fully assembled and ready to hang, min. 15' cord (110 volt) attached, transformer to be part of piece. No fees. Curator: Rocky Pinciotti. No insurance. 40% commission. **Let There Be Neon, 38 White St., P.O. Box 337 Canal St. Station, New York, NY 10013; 212-226-4883; fax 431-6731**

*Deadline July 29*

#### **Film and Video**

Seeking submissions from Northern California media artists. 3/4", Super 8, 16mm and 35mm. 1/2" for preview only. Entry fee: \$35. Early admission encouraged. For info, send SASE to:  
**FAF, 346 Ninth St., 2nd flr, San Francisco, CA 94103; 415-552-8760**

*Deadline July 30*

#### **New Media Showcase**

Seeking entries using digital methods in composing or delivery. All genres. VHS, Hi8, SVHS, 16mm, 35mm, or CD-ROM. Entry fee: \$25. Contact Stephen Ashton. **Wine Country Film Festival/New Media Showcase, Box 303, Glen Ellen, CA 95442; 707-996-2536**

*Deadline August 22–26*

#### **IEEE TENCON '94 call for papers**

IEEE Region 10's 9th Annual International Conference Special Session on Computer Graphics and Applications. One day will be devoted to computer graphics technology and applications. For details contact Dr. Murali Damodaran.

**Center for Graphics and Imaging Technology, Nanyang Technological University, Nanyang Ave., Singapore 2263; tel 65-799-5599; fax 65-792-4117; mmurali@ntu.ac.sg**

*Deadline November 1*

#### **Poetry/Film Video Festival**

Theme of 19th Annual: *The Secret is Out*. Poetry films and videos will reach a larger audience than ever before, as the film/video poets join the 9th Annual National Poetry Festival at the Yerba Buena Art Center. New: CD ROM format accepted. Cash awards, works to tour. Entry fee, \$10. For info send SASE to: **Poetry Film Workshop, Fort Mason Center #D, San Francisco, CA 94123**

*Deadline November 1*

#### **The 19th Annual Poetry Film/Video Festival**

A growing multimedia arts event aimed at bringing poetry films and videos to larger audiences. Will accept poetry CD-ROMs for consideration. Entry fee \$10. Cash awards and nationwide tour for winning entries. For applications, guidelines, etc., send SASE to: **The Poetry Film Workshop, Fort Mason Cultural Center, Bldg. D, San Francisco, CA 94123**

*Ongoing*

#### **HiOctane Video**

An independent-video cable program seeks submissions reflecting diverse artistic/cultural/political viewpoints, under 30 minutes, conforming to FCC regulations. Artists receive free Beta SP editing time. Formats: Hi8, VHS, SVHS, 3/4", 3/4" SP, Beta, and Beta SP. Deadline: the first of each month.  
**HiOctane Video, c/o VideoCat Productions, 310 Townsend St. #112, San Francisco, CA 94107; 415-512-9061.**

#### **The Photo CD Book**

Handbook developed by Verbum and Eastman Kodak. 63-page introduction to a technology already in use in the publishing world. Soon museum curators will acquire CD-photo technology to document their collections, and will prefer that artists submit work in that format. It is a good idea to learn about it. For instance, better film-to-CD transfers can be made from negatives, so the slide films that artists now use may no longer be the best choice. \$14.95. Order from:  
**Verbum, P O Box 189, Cardiff, CA 92007; 619-944-9977; Fax -9995**

*Ongoing*

#### **Los Angeles Contemporary Exhibitions**

LACE is accepting entries for video installations for their new Hollywood Boulevard location. One 19" monitor without sound is available. Format: VHS. No deadline. Send tapes with a project description and/or artist statement, current bio and 9x12 SASE, \$2.90 postage to: **LACE, 6522 Hollywood, CA 90028**

## Aerial Press

Mathematician Ralph Abraham, whose interests, he says, are "the three Ms, Music, Mathematics and Mysticism," started Aerial Press to publish The Visual Mathematics Library which include his well-illustrated, pioneering books on Dynamical Systems and Chaos. It also distributes interesting tapes and books on chaos and creativity, wisdom, and healing. **Aerial Press, PO Box 1360, Santa Cruz, CA 95061; 408-425-8619**

## Ongoing

### New American Makers

Seeking submissions of video works made with a "compelling personal vision." Interested in "works of diverse styles by diverse people." Artists receive \$2 per minute honoraria for works screened. All genres and formats. Send entry with SASE, \$10 fee, and short description.

**New American Makers, P.O. Box 460490, San Francisco, CA 94146; 415-695-2904**

### Residency Program (Newark Valley, NY)

At the Experimental Television Center. 5-day intensive residency open to U.S. artists, approaching video as a unique practice. Includes equipment and instruction/assistance. **Experimental Television Center, Ltd., 109 Lower Fairfield Rd., Newark Valley, NY 13811; 607-687-4341**

## Ongoing

### video i

KTEH is seeking finished works by Bay Area independent producers and filmmakers for this series, especially works reflecting local diversity of cultures and viewpoints. Send description and sample tape. Danny McGuire, Executive Producer. **KTEH-TV, 100 Skyport Dr., San Jose, CA 95110-1301; 408-437-5454**

### Apprenticeship Alliance

Connects artists with helpers who work free in return for learning unique skills in the San Francisco Bay Area. The artist requesting help pays a fee to be listed. Directory of master artists and skills apprentices will learn published annually. **151 Potrero, San Francisco, CA 94103; 415-863-8661**

### Artists in Print

A San Francisco nonprofit resource and support center for the graphic arts community, which can provide acquaintance with the area, the industry, trends or contacts.

**Artists in Print, 665 Third St., Suite 530, San Francisco, CA 94107, 415-243-8244; fax 362-1989**

## Center for Visual Arts

Large slide registry purports to be a record of art-making in the San Francisco Bay Area for the last 20 years, but has almost no slides of high-tech art. Ylem artists, consider setting the record straight! Registry plans to create CD-ROMs of its 40,000 slides. Other member benefits are referral services, member exhibitions, workshops and much more. Membership: artists, \$40 with volunteer time or \$50 without; students, \$5 with volunteer time. **Center for Visual Arts, 713 Washington St., Oakland, CA 94607; 510-451-6300**

### CyberArtists List

To join, send email to [listproc@u.washington.edu](mailto:listproc@u.washington.edu). Leave subject line blank; in message body, enter only: **subscribe cyberartists yourname**. To join Electronic Cafe interest group List, send e-mail to [listproc@u.washington.edu](mailto:listproc@u.washington.edu). Leave subject line blank; in message body, enter only: **subscribe ecafe yourname**.

### "Dances for the Mind's Eye"

Dr. Schaffer and Mr. Stern and Scott Kim do topological transformations together onstage. Engage these three talents for beautiful and hilarious dances about math and physics!  
**Dr. Schaffer and Mr. Stern, P.O. Box 8055, Santa Cruz, CA 95061; Karl 408-439-8541 (h), 408-864-8214 (w), Erik 801-399-3588 (h), 801-626-6615 (w), Scott 415-328-6583 (w); scottkim@aol.com**

### International Interactive Communications Society (IICS)

The premier nonprofit for professionals involved with interactive multimedia. The group exchanges information on new technologies, creative influences, and industry trends.

**2601 Mariposa, San Francisco, CA 94110; 415-252-8114**

### Internet Starter Kit

By Adam C. Engst (Hayden Books, \$29.95). Clear explanations. Comes with free FTP file on disk and 2 weeks free connect time.

### Multimedia Development Group (MDG)

A nonprofit trade association serving the multimedia community's business and professional needs, facilitating communication, providing access to information, technology, and professional services, and promoting members' capabilities. Membership is \$300 for individuals. **2601 Mariposa, San Francisco, CA 94110; 415-553-2300; fax 553-2403**

## Multimedia Power Tools

A book/CD-ROM, by Peter Jerram, Michael Gosney, the editors of *Verbum* magazine, and others (Random House/Verbum, \$49.95). The book offers information on the field, as well as instruction on producing graphics, sound, video, etc., and is indexed to 15 projects on the CD-ROM. The CD contains hundreds of clip media files from top publishers, and demo programs from major companies.

**Verbum, Inc., 2187-C San Elijo Ave., Cardiff, CA 92007; 619-944-9977; fax -9995; MCI/A-LINK: VERBUM**

### The International Interactive Communications Society (IICS)

Brings together professionals from the allied fields of training and education, computer science, instructional design, marketing, multimedia production and communications. IICS is dedicated to the advancement of interactive technologies. A recent project put members' multimedia works on a shared CD ROM disk. Dozens of chapters all across the US and Canada. A monthly newsletter, free meetings throughout the world, discounts on books, magazines, and other items.

**IICS Executive Office, P.O. Box 1862 Lake Oswego, OR 97035, 503-649-2065; Fax 503-649-2309.**

### The Whole Internet: Users Guide & Catalog

by Ed Krol (O'Reilly & Assoc., pub). Explains Internet jargon clearly.  
**707-829-0515; nuts@ora.com**

### Video Preservation: Preserving the Future of the Past

by Deirdre Boyle. An overview of Video collections and preservation efforts in the U.S., listing people with expertise in video preservation and archiving and lists facilities that clean and remaster videotape.

**Media Alliance, c/o Thirteen/WNET, 356 West 58th St., New York, NY10019; 212-560-2919**

Ylem gratefully acknowledges the sustaining efforts of Trudy Myrrh Reagan and Russell Reagan in producing 4 years and six months of the Ylem Newsletter. In this July 1994 Issue, the Ylem Newsletter is now being produced by other Ylem members. Acting editors are: Trudy Myrrh Reagan-art editor; Kali Grosberg-content editor; Sara Richardson-layout editor; Theo Ferguson-calendar editor. Anyone interested in participating in this process is invited.

Contact: Kali at 415-956-1568.

Some calendar items reprinted from Art Calendar (PO Box 199, Upper Fairmont, MD 21867. Subscriptions \$32/yr.) Multimedia Reporter (from North Bay Multimedia Assn.), Video Networks (from BAVC), I/O (NYC Siggraph), Leonardo Electronic Almanac and Fine Art Forum email. We cannot verify all information sent to us.

# Doce propuestas de Arte Reacti

by Sonya Rapoport

## (Metro Opera. Madrid, Spain, April 24 \ May 8, 1994)

In this exhibition in a Madrid subway, curator Rafael Lozano-Hemmer presented state-of-the-art technology in a variety of interactive modes. It was gender-balanced and international in scope. The Metro Opera, a subway station under the old Opera House, was transformed into a challenging art exhibition venue.

The show had an unusual entrance: Passing through a turnstile, visitors shuffled down a ramp in a semi-dark tunnel permeated with slightly choking train fumes. On the walls were Daniel Canogar's reflections through film negatives of images of disembodied arms and hands that illuminated the path to virtual space. Farther into the cavern, as if dropped from outer space, was Jeffrey Shaw's surreal *Virtual Museum* encased in hurricane fencing, the same partitioning used throughout the exhibition.

I entered the open cage, sat in an elegant black leather chair, and proceeded to play "high-tech dodge 'em" in three-dimensional virtual space that was projected on a screen. My visits to the rooms of the *Virtual Museum* were controlled by "driving" the robotic chair. The rooms offered fleeting sights of beautifully rendered architecture filled with word sculptures. I never quite penetrated deeply enough within these walls. Soon I felt I had seen all there was to see.

Farther up the tracks, at Myron Krueger's station, Canogar's "post-fotografia" images came alive in simulated flight motions as visitors interacted with Krueger's *Videoplacer*. The participants stood in front of a white backdrop and watched their gestures control their viewing perspectives of our planet. Lushbirds'-eye or worms'-eye view visuals of the adjusting planet were projected onto a huge screen. This recalled a provocative parallel between art critic Harold Rosenberg's reference to the large abstract expressionist parcanvases of the 60's

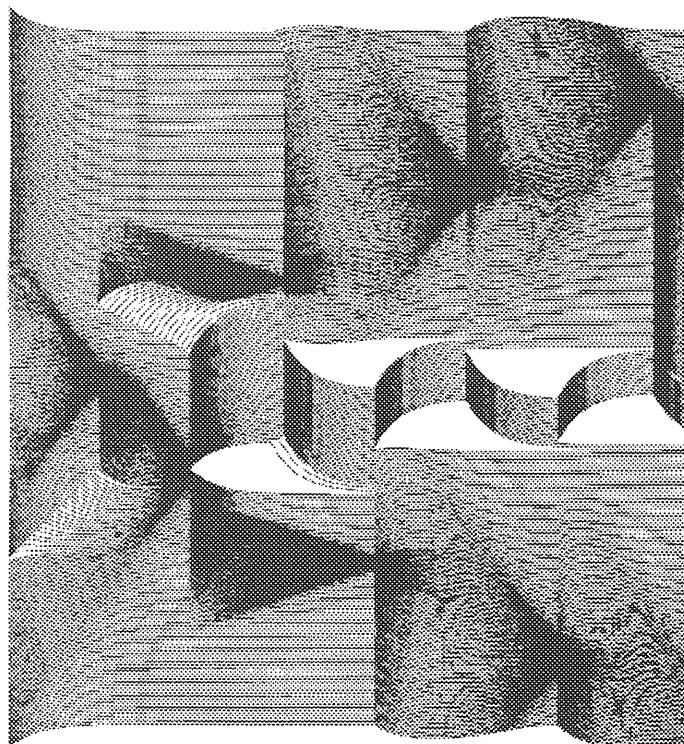
that the aesthetic had been subordinated by the artistic expression.

He claimed that what mattered was the revelation contained in that act; and, in the final effect, whatever the image may or may not be, there must always be a tension. Since Krueger feels that the computer must determine the consequences of the interactions and initiate responses of its own, I wonder if we should look elsewhere for Rosenberg's *frisson*. Outside of Krueger's arena, the environment once again took on an eerie shade.

Following subway tracks and walking through car-wash style slit-projection screens, I traveled via video format, along Pedro Garbel's passage through life. At the other end of the tracks, Esther Mera's tour de force video installation synchronized the subway train schedule with her video clips. Small monitors framing a large observation window became alive with hands cackling in sign language when the trains passed by.

For me, perhaps, the most thoughtful piece was Nell Tenbaaf's *Horror Autotoxicus*, a viewer-activated animated cartoon of the double helix with audio that related the Oedipus myth. In this setting, I viewed the helix's separating and adhering bases to be broken subway tracks alternating positions at different junctures. As a metaphor for a scientific oracle, it was a somber warning of predestination. Perhaps we will eventually resettle in the underground. Mario Canali and Marcello Campione; Daniel Canogar; Monicka Fleischmann, Christian Bonn, and Wolfgang Strauss; Pedro Garbel; Myron Krueger; Esther Mera; Jeffrey Shaw; Christa Sommerer and Laurent Mignonneau; Nell Tenbaaf; and Trimpin. (Sharon Grace's and Catherine Richards' works were not exhibited due to installation difficulties).

A longer version of this review can be found in Leonardo Digital Review



artist Craig Cassin, 100 Designs in Black and White

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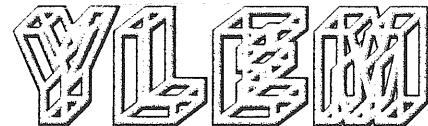
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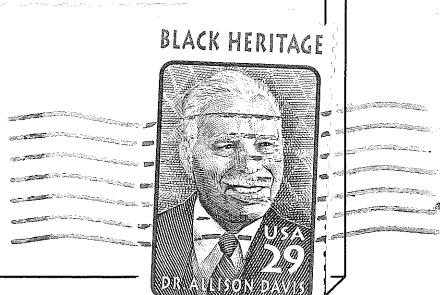
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